Johns-Manville

Roofing Materials

Description of Built-up Roofs Ready-to-lay Roofing, Asbestos Shingles & Asphalt Shingles

DS Series 212

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J-M Bonded Built-up Roofs

Johns-Manville provides a built-up roof for every requirement

Built-up roofs provide the most scientific and economical method of roofing all types of large buildings with low-pitched roofs. Whether the problem is merely one of simple protection from the elements or one involving resistance to the passage of heat or cold, the seamless built-up construction is the most practical for the low-pitched type of roof covering large areas.

The modern J-M Built-up Roof consists of several layers of waterproofed felts cemented together with a bituminous material, securely fastened to the roof deck and thoroughly protected at all junctions formed by the deck and vertical surfaces with the Johns-Manville System of Flashing.

Johns-Manville has developed, over a long period of years, a large number of different types of built-up roofs, each of which is designed to meet certain definite requirements in type of construction and pitch of roof, the expected life of the building and other economic factors involved.

Types of J-M Built-up Roofs

The number and kind of felts used, either asbestos or rag, vary with the different types of roofs. The final surfacing also varies, being either a smooth-surfaced coating, slag or gravel, or felt with a colored mineral surface. This makes possible a wide selection according to desired effect, conditions in structure, protective requirements and service. The smooth-surfaced asbestos roof, however, gives the best roof assurance.

Asbestos Smooth-Surfaced Roofs: J-M Smooth-Surfaced Asbestos Built-up Roofs are the outgrowth of many years of study and experience in producing durable, fireproof, weather-proof, light-weight roofs at a moderate cost. They are suited for practically every type of industrial building, warehouse, office building, hotel, hospital and apartment house. This type of roof consists of built-up, alternating layers of asphalt-saturated asbestos felt and roofing asphalt. The top finish is a specially prepared cold asphaltic roof-coating.

The numerous advantages of smooth-surfaced asbestos roofs include resistance to fire and heat of the sun, protection against decay, easy location of leaks, quick and inexpensive repairs, and no excessive weight (owing to the elimination of slag or gravel often employed as a surfacing).

Combination Smooth-Surfaced Roofs: Johns-Manville specifies several types of combination rag felt and asbestos felt built-up roofs. These roofs employ an asphalt-saturated rag base felt and asphalt-saturated asbestos finishing felts. The top surface is a cold asphaltic roof-coating.

Gravel or Slag-Surfaced Roofs: These J-M Roofs consist of several layers of tar-saturated asbestos felts or tar-saturated rag felts, employing gravel or slag for the top surfacing. Similar in construction are roofs designed for spray pond service (double surfacing of slag or gravel) and built-up roofs which will be overlaid with promenade surfacings embedded in cement.

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Applied over 30 years ago, this J-M built-up roof is one of the many giving trouble-free service after the 20-year bond period has elapsed

Mineral-Surfaced Roofs: Where an ornamental mineral-surfaced roof is desired, J-M Split Sheet Slatekote Roofing may be used over asphalt-saturated rag felts.

Insulated Roofs: J-M insulated roofs employ J-M Roofinsul, Rock Cork Roof Insulation, or other approved insulation, under the various types of built-up roof construction. The J-M system of insulating roofs is especially designed to prevent condensation on the under side of the deck and to eliminate discoloration of ceilings and the annoyance and damage caused by roof drip. The numerous advantages of roof insulation and the various problems involved appear on other data sheets.

Flashings

One of the most important steps in built-up roof construction is the flashing. More than any other place on a roof, leaks occur at the junction formed by the roof deck and a vertical surface, such as a parapet wall, skylight curb or wall of an adjacent building.

Johns-Manville has designed several types of flashings to accommodate the different structural conditions encountered in a roof. The flashing felts, made from the same basic materials as the asbestos roofing felts, are used in conjunction with a waterproofing or cementing agent specially prepared by Johns-Manville. Drawings illustrating typical flashing methods are shown on other data sheets.

Application and Inspection

Proper application of the materials is just as important in constructing a built-up roof as are the materials themselves. For this reason, in every community J-M Approved Roofers have been appointed. These appointments are based on thoroughness of workmanship and on financial responsibility. Johns-Manville also maintains a corps of inspectors whose services are provided in conjunction with bonded built-up roofs. This inspection is required on every roof which is to be bonded, and is rendered before, during, and after the application of the roof.

Detailed application directions for Johns-Manville Bonded Built-up Roofs, using either asphalt-saturated felts with bonded asphalt or tar-saturated felts with bonded pitch, are set forth on separate data sheets.

Painting: Where painting is desired, as on airport roofs, it is vital that the paint or primer be especially adapted for application over asphaltic surfaces. Otherwise, bleeding will occur.

Bonded Roofs

All Johns-Manville Built-up Roofs, except on the Pacific Coast, will, when desired, be covered by a bond of the National Surety Corporation, guaranteeing the performance of the particular roof for a period of from ten to twenty years, depending upon the type of roof applied. This bond is issued only on roofs laid by Johns-Manville Approved Roofing Contractors and in conjunction with the J-M Inspection Service.

Flashing Endorsement

Where J-M Flashing Materials are used in conjunction with Johns-Manville Built-up Roofs, a ten-year flashing endorsement will be attached to and become part of the bond, under the same conditions as are imposed for the roof.

This smooth-surfaced asbestos roof, applied in 1910, is still in good condition

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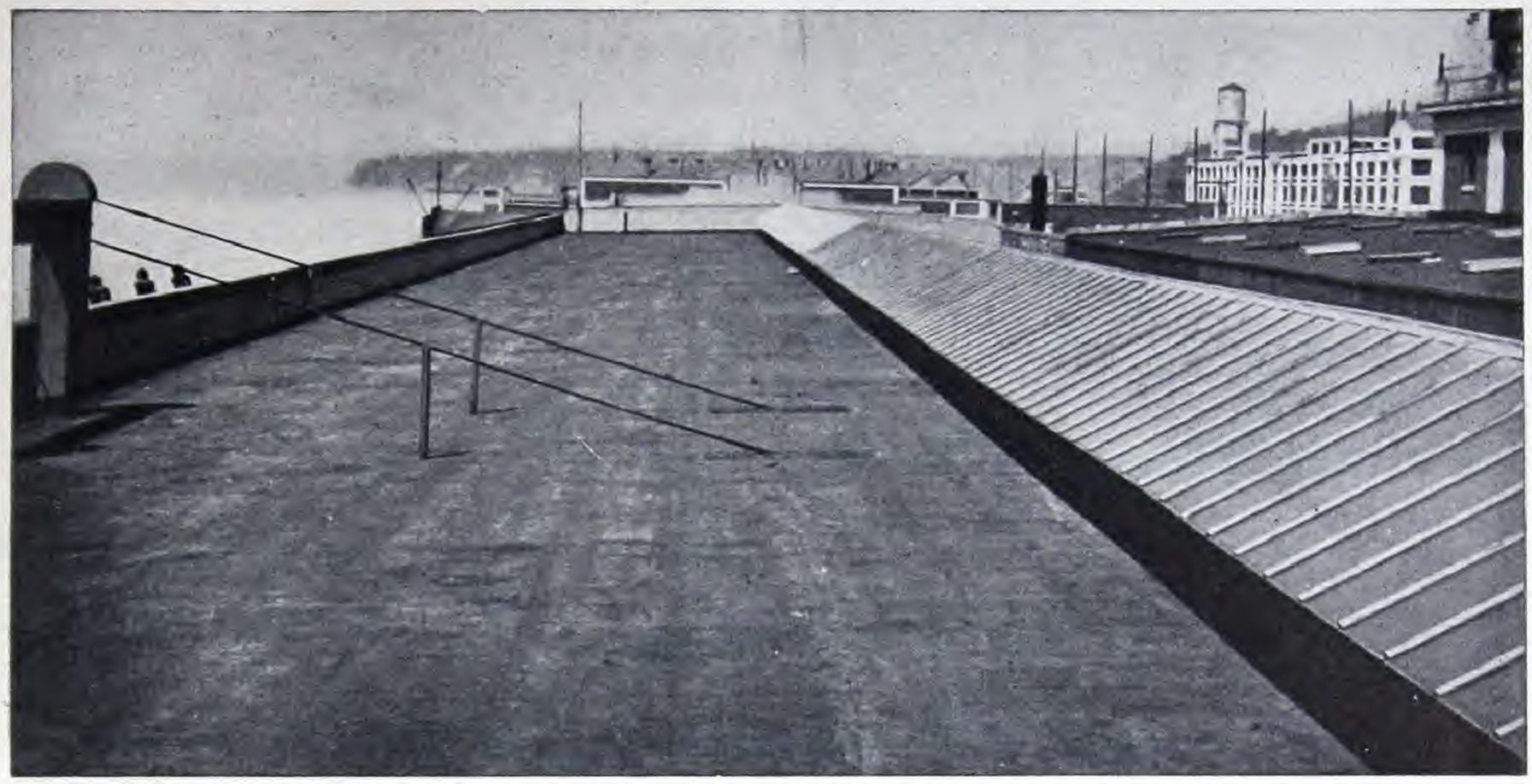
Built-up Roofing Felts and Cap Sheets



Twenty-nine years old and still in good condition, this J-M Smooth-Surfaced Built-up Roof has long outlived its bond

The weights given for the following J-M Built-up Roofing Felts and Cap Sheets are approximate.

Asbestos Base Flashing (Reinforced): This material, consisting of an outer layer of heavy asbestos waterproofing felt and a layer of Type A Asphalt-Saturated Waterproofing Fabric, cemented together at the factory, is used in conjunction with J-M System of Flashing and for edging. Furnished in rolls of 108 sq ft, 32″ wide, weighing 65 lb; 54 sq ft, 16″ wide, weighing 33 lb. For edging, there are rolls 8″ wide by 40 ft 6″ long, weighing 16 lb.

Asphalt-Saturated Waterproofing Fabric A: Woven cotton fabrics, in two weights, which find their principal application in conjunction with asbestos felts on brine or spray decks and in built-up membrane waterproofing work. Before saturation, Type A weighs 4 oz per sq yd. Approixmate shipping weight after saturation: 13 oz per sq yd. Standard rolls, 36″ wide, contain about 522 sq ft.

Double Coated Waterproofing Fabric Type C: This fabric, designed for spandrel waterproofing work, is asphalt-saturated cotton which is coated with asphalt on both sides. The coating permits embedment in a suitable plastic without an outside finish coat. Weight per sq yd before asphalting 4 oz; finished weight, 2.5 lb. Furnished in rolls about 36″ wide, containing approximately 270 sq ft. Weight, 76 lb per roll.

Regal Cap Sheet: A rag felt cap sheet which is furnished in 1-sq rolls (108 sq ft), 36″ wide, weighing 43 lb.

15-lb Perforated* Asbestos Roofing Felt: An asphalt-impregnated asbestos felt which is perforated to allow entrapped air to escape from underneath the felt at the time of application. The perforations also cause better embedment in the bitumen. The felt is used for asbestos and combination rag and asbestos built-up roofs. Also used for felt-stripping base flashing, for constructing three and five-course Asbestile wall treatment. Mopping lines facilitate laying of the felt which is furnished in 3-sq rolls (324 sq ft) 32″ wide. This material weighs 45 lb per roll. Also cut in 4″-wide strips for felt-stripping, in rolls of 121½ linear feet weighing 5½ lb per roll.

Flexstone Roofing, Extra Heavy: Composed of four layers of asbestos felt, thoroughly saturated and cemented together with asphalt. Used as a cap sheet over certain types of bonded built-up roofs where there is light foot traffic. Furnished in sheets 32″ x 80″, 6 sheets to the sq, packed 4 sq per crate. Weight of Flexstone uncrated, 83 lb per sq; crated, 98 lb per sq. One crate (4 squares) contains sufficient material to cover 400 sq ft of roof area.

* Also available unperforated.

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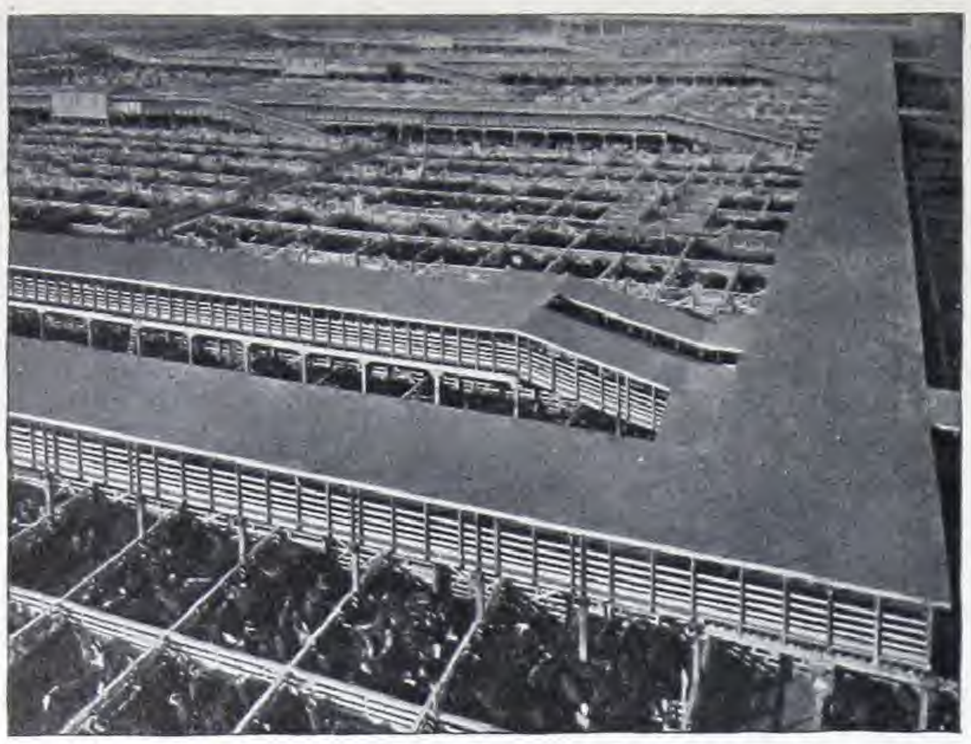

J-M Built-up Roofing on the runways of a large stock yard

No. 45 Base Felt: Heavy rag felt, thoroughly saturated and coated with asphalt. Used as a base felt on certain rag and asbestos felt bonded built-up roofs. Furnished in 1-sq rolls (108 sq ft, 36″ wide, weighing 53 lb per roll).

Salamander White Top Asbestos Roofing: A 2-ply material composed of an unsaturated and a saturated asbestos felt cemented together, used with the white surface exposed as a cap sheet on sawtooth and other pitched surfaces for light reflection. Salamander White Top Asbestos Roofing is furnished in 2-sq rolls (216 sq ft), 32″ wide, with 1½″ selvage edge, weighing 68 lb per roll.

Split Sheet Slatekote Roofing: Heavy asphalt-saturated rag felt, 36″ wide, with 19″ selvage edge for cementing and with 17″ of exposed section mineral-surfaced. Used as a cap sheet on built-up roofs where color is desired. Split Sheet Slatekote Roofing is furnished in rolls weighing 55 lb. Each roll covers 50 sq ft weather area.

Standard Asphalt-Saturated Rag Felt: A felt used for certain asphalt and rag felt built-up roofs and as a liner under shingles. The asphalt-saturated rag felt is furnished in rolls 36″ wide as indicated in the table shown above.

Style Number	Area of roll, sq ft	Total weight per roll, lb
30	216	60
15	432	60

This J-M Smooth-Surfaced Built-up Roof was installed on the plant of a large water power and paper company

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No. 50 Asbestos Base Felt: A perforated asbestos felt thoroughly saturated with asphalt. This felt is used as a base sheet on certain asbestos felt bonded built-up roofs. Furnished in 2-sq rolls (216 sq ft), 32″ wide, weighing 64 lb.

Standard Tar-Saturated Rag Felt: Used in service with Standard Roofing Pitch and slag or gravel on built-up roofs. Furnished in style No. 15 in 4-sq rolls (432 sq ft), 36″ wide. The weight is 60 lb per roll.

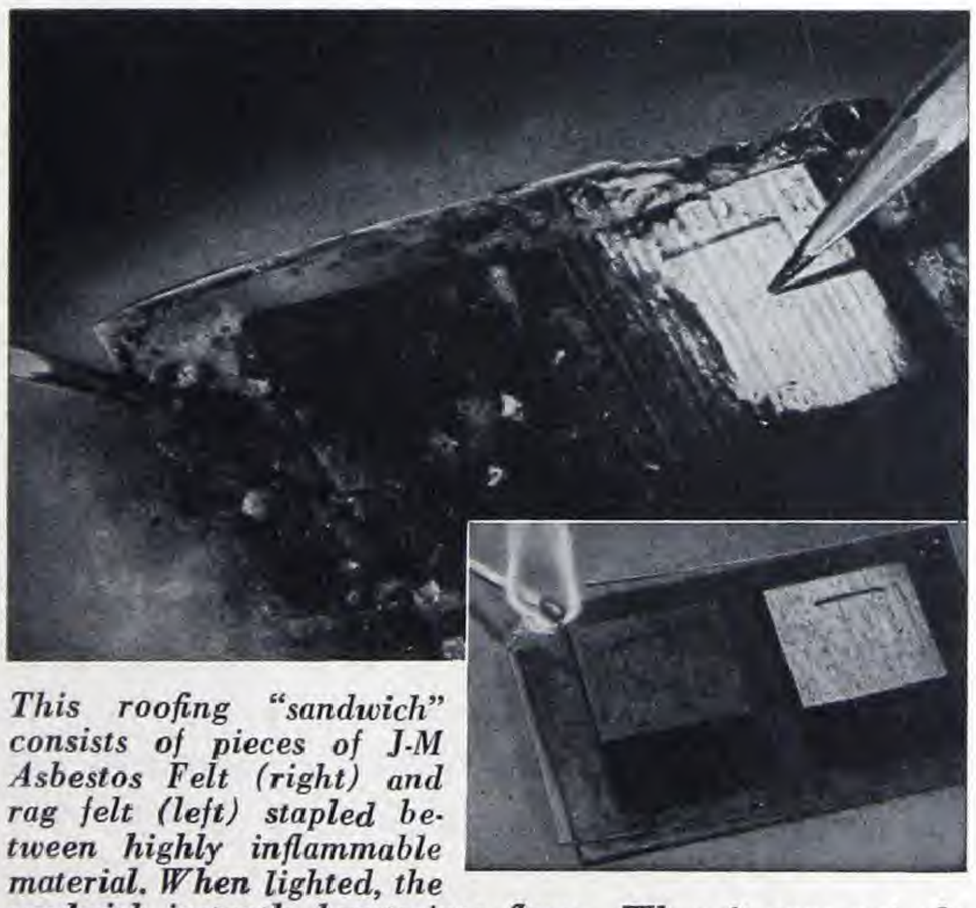
Tar-Saturated Asbestos Roofing Felt 15-lb.: A tarred asbestos felt for use with Bonded Roofing Pitch and slag or gravel on bonded roofs. Furnished in 4-sq rolls (432 sq ft), 32″ wide, weighing 65 lb per roll, or 16¼ lb per square. This weight is based upon an area of 108 sq ft.

Cold-Application Asbestos Felt: A double-coated cap sheet for use in the cold-application of asbestos felts for J-M Built-up Roofs. The asbestos felt is furnished in 2-sq rolls (216 sq ft), 32″ wide, weighing 70 lb per roll.

These large docks, Port of Oakland, California, are roofed with J-M smooth-surfaced asbestos roofing

Asphalts, Coatings and Accessories

Asbestos Fibrous Roof Coating: A high-grade black roof coating made of asbestos and asphalt in the right consistency for brush application. It is made with asbestos fibre ground for a smooth coating or unground for use where the roof is in bad condition, such as rusted metal roofs. Covering capacity, 75 to 150 sq ft per gal, depending on condition of roof, and whether coating is ground or unground.Shipped in 1-gal cans, six per carton, and in 5 and 50-55-gal containers. Specify ground or unground.



This roofing "sandwich" consists of pieces of J-M Asbestos Felt (right) and rag felt (left) stapled between highly inflammable material. When lighted, the sandwich instantly bursts into flame. When it goes out, the organic rag felt is burned to ashes; the mineral J-M Asbestos Felt looks slightly sooty but is unharmed

Asbestos Roof Putty: A high-grade plastic roof putty, made of asbestos fibre and asphalt, which clings tenaciously to metal, felt, wood or glass. Used for patching leaky roofs, setting flashing flanges around vent pipes and for various other purposes. Furnished in gray and black in available containers.

Bonded (Filled) Roofing Asphalt: This asphalt is used on J-M Bonded Built-up Roofs, except those in which tar-saturated asbestos or rag felts are used.

The asphalt is furnished in solid form in various sized containers.

Bonded Roofing Pitch: Used with tar-saturated asbestos felts in J-M Bonded Tar and Gravel Roofs. Also used for the top pouring on certain low-pitched, tar-saturated felt and gravel roofs, to receive the surfacing of gravel or slag. It is furnished in solid form in various sized containers.

Cold-Application Cement: A cement used with cold-application of asbestos felts for built-up roofs. It is furnished in 5, 25-30 and 50-55-gal containers.

Concrete Primer: A thin liquid asphalt especially prepared for priming concrete or gypsum decks to form a bond between the asphalt and the deck. It is always applied cold and must be allowed to dry thoroughly. If material thickens it may be thinned with gasoline, naphtha or benzine. Kerosene must not be used for this purpose. Covering capacity about 1 to 2 gal per 100 sq ft, depending upon the surface. Furnished in containers of 5, 25-30 and 50-55-gal.

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Ready-Mixed Asbestile: A heavy-bodied plastic cement composed of asbestos fibre, asphalt and other mineral ingredients, designed to afford thorough water-tightness over asbestos base flashing where used in conjunction with the 4″ strips of asphalt-saturated asbestos felt. It is particularly adapted for use in the J-M System of Three-Course Asbestile on the flashing of parapet walls, and in the felt-stripping of base flashing material. Furnished in 5, 15, 30-55-gallon containers.

Regal Roof Coating: A high-grade black asphaltic roof coating, applied cold as the surface finish on smooth-surfaced J-M Bonded Built-up Roofs. One gallon (approx. 8 lb) required per 100 sq ft of roof area. Furnished in containers of 5, 25-30 and 50-55-gallons.

Roofinsul: A strong, rigid sheet of high insulating value made of southern pine fibre, interlaced, felted and rolled into board form. It is used over any type of roof deck in conjunction with built-up roofs. Roofinsul is supplied 23¾″ x 48″, ½″ thick with square edges. Thickness of 1″, 1½″ and 2″ are also furnished, cemented and stapled together with a 1″ offset or with square edges. Packages of ½″ Roofinsul contain 110.8 sq ft (1 sq). Packages of 1″ Roofinsul contain 55.4 sq ft; those of 1½″ contain 39.6 sq ft, and 2″ thickness 31.7 sq ft. The weight of Roofinsul is about 0.77 lb per sq ft, ½″ thick.

Rock Cork Roof Insulation: Made of mineral wool combined with a waterproof binder, this excellent insulation material will maintain its efficiency indefinitely. J-M No. 15 Asphalt-Saturated Rag Felt applied to one side of the Rock Cork with a high melting point asphalt permits felt-to-felt bonding with the built-up roof. Rock Cork is non-capillary and does not rot, support mold or disintegrate. The insulation is furnished in sheets 18″ x 36″ in thicknesses of 1″, 1½″ and 2″ and is packed in cartons containing 54, 36 and 27 sq ft, respectively. The weight of Rock Cork Roof Insulation is about 1.6 lb per sq ft, 1″ thick.

Roofing Nails and Caps: One inch bright roofing nails are used with tin caps on built-up roofing over wood decks. For nailing flashing, 1″ large head, thick-shank nails are used. Duck bill nails, ⅞″, 1⅜″ and 1⅞″ long, are used for nailing through insulation on steel decks.

This 30-year-old roof is still giving excellent service

Roofing Tape: A waterproofing fabric for use with roof coatings and putties for mending or bridging large cracks or holes. Furnished in rolls of 36 linear ft, 3″ wide, 4 rolls per carton.

Rosin-Sized Sheathing Paper: An inexpensive red or blue sheathing paper sometimes used in conjunction with J-M Built-up Roofs. The red paper is furnished in rolls 36″ wide, in four weights: 4, 5, 6 and 8 lb per 100 sq ft or about 20, 25, 30 and 40 lb per roll of 500 sq ft. The blue paper, also 36″ wide, is supplied only in the 4-lb weight.

Special A. R. Roof Putty: A black roof putty, more adhesive than Asbestos Roof Putty. Especially suitable for quick repairs on smooth surface asphalt roofs where it is necessary to seal plies of felt together. The putty is packed in containers holding 1, 5 and 15 gallons.

Standard Asphalt Waterproofing Cement: A specially compounded asphalt used particularly on spray decks and for other waterproofing work relating to built-up roofs. Furnished in metal drums.

Standard Roofing Asphalt: Used for certain types of built-up roofs. Furnished in four types, 140, 150, 170 and 190 (the numbers indicating approximate melting points). Shipped in solid form in various sized containers.

Standard Roofing Pitch: Used on bonded roofs for certain specifications. The pitch is shipped in solid form in various sized containers.

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J-M Ready-to-Lay Roofings

Asbestos Ready-to-Lay Roofings

J-M Asbestos Ready-to-Lay Roofings, made of asbestos felt thoroughly impregnated with asphalt, are rotproof, weatherproof and highly fire-resisting. They are particularly adapted to pitched roofs of factories, many types of industrial buildings, garages, service stations, houses, barns, sheds etc. The roofings are manufactured in three general types: smooth black top, smooth white top, and mineral surfaced. They are packed with galvanized nails, lap cement and butt-lap strips. If specified, they are supplied without nails and cement. The weights given are approximate.

Flexstone Smooth-Surfaced Roofing: This roofing consists of three or four plies of asphalt-impregnated asbestos felt, cemented together with asphalt into heavy, strong sheets. The sheets are furnished with a smooth surface, 32″ x 80″, six sheets per sq. Three-ply material, designated "Heavy," is packed 5 sq per crate containing sufficient material for 500 sq ft of roof surface. The shipping weights are 80 lb per sq crated, and 66 lb uncrated. Four-ply material, "Extra-Heavy," is packed 4 sq per crate containing sufficient material for 400 sq ft. Weights for shipment are 98 lb per sq crated, and 83 lb per sq uncrated. The Heavy material carries Underwriters' Class B label; Extra Heavy, Class A.

Flexstone Slate-Surfaced Roofing: A heavy asphalt-impregnated asbestos felt, surfaced on one side with red, green, or blue-black mineral granules, especially designed for steep-roofed buildings where color is desired in the finished roof. The material is furnished in 1-sq rolls, 32″ wide, with 2″ selvage, shipping weight 90 lb and carries the Underwriters' Class B label.

J-M White Top Roofing: This roofing is made of plies of asphalt-impregnated asbestos felts cemented together with asphalt, with a white (unimpregnated) asbestos felt on top. It has been used on many industrial buildings on the back of saw-tooth construction because of its clean, attractive, light-reflecting surface and its fire and weather-resisting properties. White Top Roofing is supplied in three weights: Standard, Heavy and Extra Heavy, each with about 1½″ selvage edge for laps. Standard (3-ply) is furnished in 1-sq rolls, 32″ wide, weighing 55 lb per sq and Heavy (3-ply) in 1-sq rolls, 32″ wide, weighing 60 lb per sq. Rolls are cut into pieces 13 ft 6″ long. Extra Heavy (4-ply) is furnished six flat 32″ x 80″ sheets per sq, 4 sq per crate, weighing 98 lb per sq crated and 83 lb per sq uncrated. Heavy carries the Class B and Extra Heavy the Class A Underwriters' label.

Flexstone Smooth-Surfaced Roofing assures an attractive and economical roof

Asphalt Ready-to-Lay Roofings

Johns-Manville manufactures several types of asphalt roll roofings, with an asphalt-saturated rag felt base, at a somewhat lower cost than the more enduring asbestos roofings. Since the life of rag felt roofing is largely dependent upon the type and quantity of saturant and coating, Johns-Manville uses only those asphalts that best resist the action of sun and weather in order to provide maximum service and durability. Asphalt ready-to-lay roofings are furnished smooth- and mineral-surfaced. The weights given are approximate and accessories are shipped as described unless otherwise specified.

Smooth-Surfaced Asphalt Roofings:

Pilot-Roofing: This material, one of the highest quality smooth-surfaced asphalt roofings, is finished with a smooth mica surface on one side and a veined talc surface on the other. It is recommended for

All colors and types are not available in all locations; therefore, consult a J-M office before selection.

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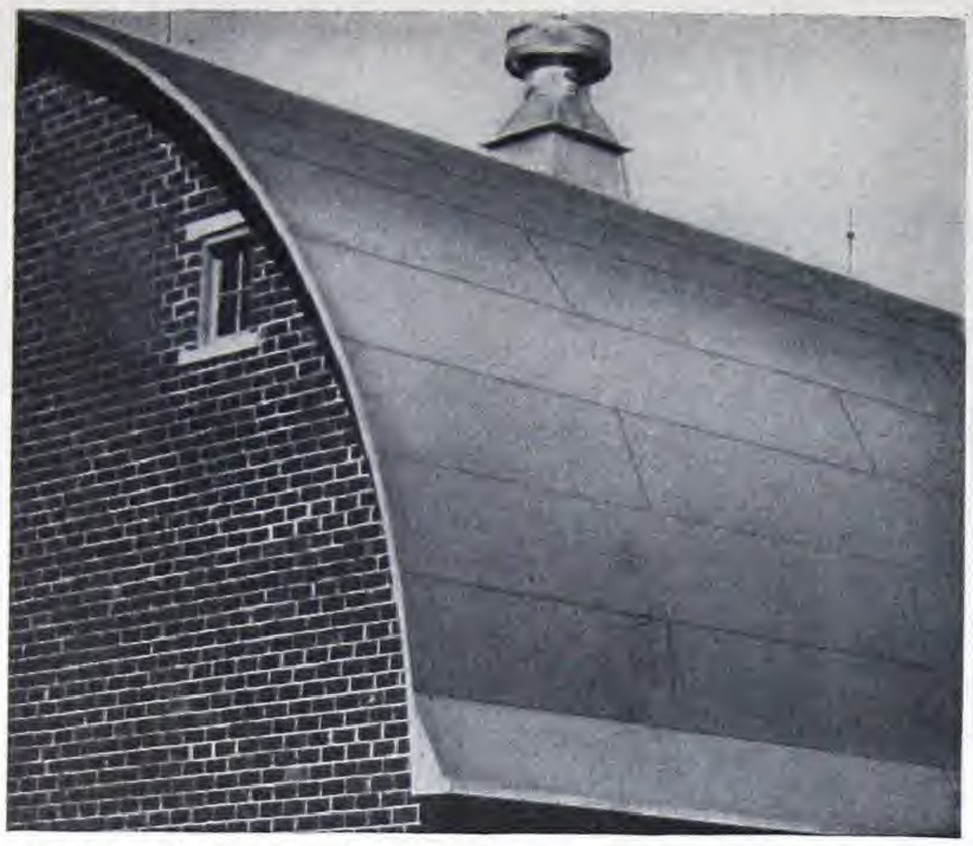

J-M Ready-to-Lay Roofings are particularly adapted to steep-roofed buildings

steep-roofed buildings. The roofing is furnished in 1-sq rolls (108 sq ft), 36″ wide, with lap cement and galvanized nails. Pilot is furnished in Heavy and Extra Heavy weights, 55 and 65 lb per sq respectively. Both weights carry the Underwriters' Class C label.

Service Roofing: This is a medium grade asphalt roofing with a veined talc surface on both sides and furnished in 1-sq rolls (108 sq ft), 36″ wide. It is available in Medium weight, 45 lb per sq, with bright nails and lap cement.

Mineral-Surfaced Asphalt Roofings:

Mineral-Surfaced roofings are especially adapted where color is desired in the finished roof. They are manufactured from rag felts heavily saturated and coated with asphalt, with colored mineral granules securely embedded in the asphalt on the upper surface. In the following descriptions, all weights given for the asphalt roofings are approximate.

Slatekote Roofing: The standard type of Slatekote is furnished in 1-sq rolls (108 sq ft), 36″ wide, with 2″ selvage edge for lap. Lap cement and galvanized nails are included. The roofing, weighing 90 lb per sq and carrying the Underwriters' Class C label, is supplied in Standard Red, Black, Tile Red, Spruce Green and Standard Green.

Slatekote Starting Strips, for starting shingles, lining valleys and covering hips and ridges, are furnished in rolls, 36-ft long in three widths, 9″, 12″ and 18″, weighing 21, 28 and 42 lb per roll respectively. Starting strips are available in Black, Tile Red, Spruce Green, Fieldstone Green, Blueblend Mix and Brownblend Mix. Packed without nails or cement.

Modernedge Slatekote Roofing: This variety of Slatekote has a split through the center of the roll in a pyramid pattern to effect thatch-like roof lines. Furnished in 32″-wide rolls to cover 100 sq ft roof area. Modernedge Slatekote Roofing is supplied in the following colors: Mossfield, Killarney Blendfield and Azure Blueblend. Packed without nails or cement, Modernedge Slatekote Roofing weighs 105 lb per sq and carries the Underwriters' Class C label.

Slatekote Duplex Roofing: This style of Slatekote is made 36″ wide, with 17″ slate surfacing and 19″ selvage for cementing, for use where a superior longer-lasting roof is desired and on pitches as low as 1″ to the foot where built-up roofing is not available. It is furnished with necessary galvanized nails and Slatekote Duplex Cement which does not require heating. The roofing weighs 61 lb per roll plus 10 lb for nails and cement which are shipped separately. Colors are Spruce Green, Tile Red and Black. Slatekote Duplex Roofing carries the Underwriters' Class C label.

All colors and types are not available in all locations; therefore, consult a J-M office before selection.

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Application of J-M Ready-to-Lay Roofings

Roof Pitches:

Ready-to-lay roofings are not suitable for use on flat surfaces, nor should they be used on roofs surrounded by parapet walls or other vertical surfaces where stoppage of leader outlets would result in water backing up and lying on the roof. In other words, these roofings should not be used on any surface that cannot be depended upon to drain water freely.

Roof Surfaces:

Ready-to-lay roofing is usually applied directly over wood sheathing, which should be composed of well-seasoned roof boards, closely laid, preferably tongue and groove, and secured with at least two nails to each rafter. Any boards that warp or curl should be drawn down by re-nailing. Any loose nails should be re-driven, knot holes or cracks covered with tin and the roof cleared of all obstructions and swept clean. This should provide a sound, smooth nailing surface.

In the case of an existing roof of old shingles, it is advisable to remove the shingles and provide close sheathing to receive the new roofing.

On old tin roofs, if the roof boards are laid close and in good condition, it is better to remove the tin. Application can be made over the tin, however, provided all standing seams and sharp edges are flattened down and nailed before the roofing is applied.

The application is as important as the materials in determining the satisfactory service to be obtained where this type of roof covering is adaptable. Particular attention should therefore be paid to detailed directions for use. See drawings on other side of page.

Laps:

Roofing is always laid so that water runs over the laps, never against exposed edges. Horizontal laps should be sealed with lap cement (except on Modernedge) and nailed about 1″ from edge. On asbestos roofing, vertical end laps are butted, and under all vertical butted end joints, 6″ wide strips of roofing felt (included with shipments) are applied, centered under the joint. These strips are coated with lap cement, into which the ends of the roofing felts are firmly embedded and nailed. On asphalt roofing, vertical laps are formed by lapping over the roofing felts and cementing and nailing as required.

Laps, minimum roof pitches, type of nailing, etc., are summarized in the table below.

Application Data on J-M Ready-to-Lay Roofing

Style	Min. roof pitch per ft.	Horizontal lap	Vertical lap	Type of nailing	Laps cemented	Nailing centers for horizontal laps	Nailing centers for vertical laps
Flexstone Smooth-Surfaced	2″	2″	Butted	Exposed	Yes	2″	2″
Flexstone Slate-Surfaced	3″	2″	Butted	Exposed	Yes	2″	2″
White Top	3″	2″	Butted	Exposed	Yes	2″	2″
Pilot-Roofing	3″	2″	6″	Exposed	Yes	2″	2″
Service	3″	2″	6″	Exposed	Yes	2″	2″
Slatekote	3″	2″	6″	Exposed	Yes	2″	2″
Slatekote Duplex	1″	19″	6″	Concealed	Yes	12″ staggered	4″
Modernedge Slatekote	4″	2″	Point over Point	Exposed	No	Top: Nail over each point Bottom: Nail in center of each point and recession.	2″
“ “	2″	3″	6″	Concealed	Yes	4″ staggered	2″
“ “	1½″	4″	6″	Concealed	Yes	4″ staggered	2″

Complete application directions for J-M Ready-to-Lay Roofings appear on other data sheets

APPLICATION OF READY-TO-LAY ROOFINGS
November, 1948 (Cancelling sheet dated March, 1947)

BMR–505

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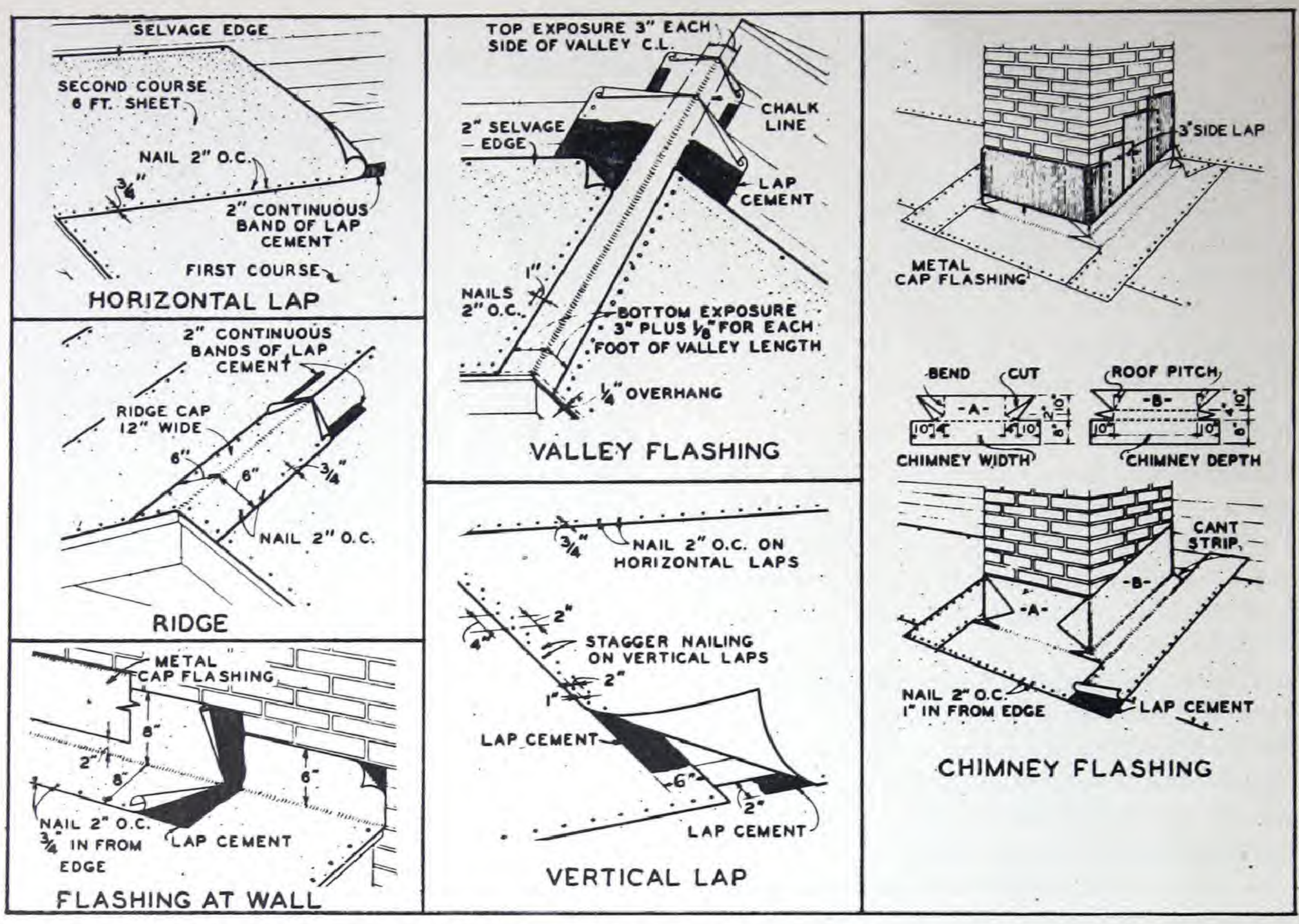


Typical details for Asphalt Ready-to-Lay Roofings

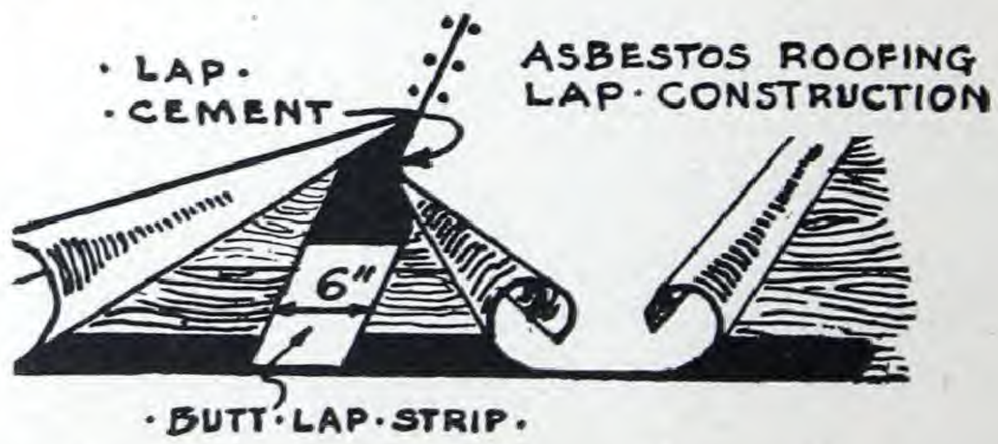
J-M Roofing Cements, Coatings and Putties

J-M Asbestos Fibrous Roof Coating: A high-grade black roof coating made of asbestos fibre and asphalt in the right consistency for brush application, with asbestos fibre ground for a smooth coating, or unground for use where the roof is in bad condition, such as rusted metal roofs. Covering capacity, 75 to 150 sq. ft. per gal., depending on condition of roof, and whether coating is ground or unground. Shipped in 1, 5 and 50-55-gal. containers. The 1-gal. containers are packed 6 per carton.

J-M Asbestos Roof Putty: A high-grade plastic roof putty, made of asbestos fibre and asphalt, used for patching leaky roofs, setting flashing flanges around vent pipes and other purposes. The putty remains waterproof and plastic, expanding and contracting with the underlying surface. It adheres tightly to metal, felt, wood or glass. Furnished in gray in 1, 5 and 50-55-gal. containers; in black in 5 and 50-55-gal. containers.

J-M Lap Cement: This material is the same as the cement packed in each roll of ready-to-lay roofing but is shipped in 1-pt.; 1, 5 and 50-55-gal. containers for use where roofing is shipped without accessories. The 1-pt. containers are packed 36 per carton; 1-gal., 6 per carton.

J-M Regal Roof Coating: A black, high-grade asphaltic roof coating, applied cold as a surface finish on smooth-surfaced roofs. One gal. (approx. 8 lb.) is required per 100 sq. ft. Furnished in 5 and 50-55-gal. containers.



Vertical lap on asbestos roofings with exposed nailing and cemented laps

J-M Roofing Tape: A waterproofing fabric for use with roof coatings and putties for mending or bridging large cracks or holes. Furnished in rolls of 36 linear ft. 3" wide, and shipped in packages containing 4 rolls.

Other Materials: J-M Ready-Mixed Asbestile, Special A.R. Roof Putty, Bonded Roofing Asphalt and Bonded Roofing Pitch are described under Bonded Built-up Roofs; Asbestos Caulking Putty in the section covering "Building Materials"; and Concrete Primer and Standard Asphalt Waterproofing Cement in the "Waterproofing and Miscellaneous Asphalt Products" Section.

Printed in U.S.A.

J-M Rigid Asbestos Shingles

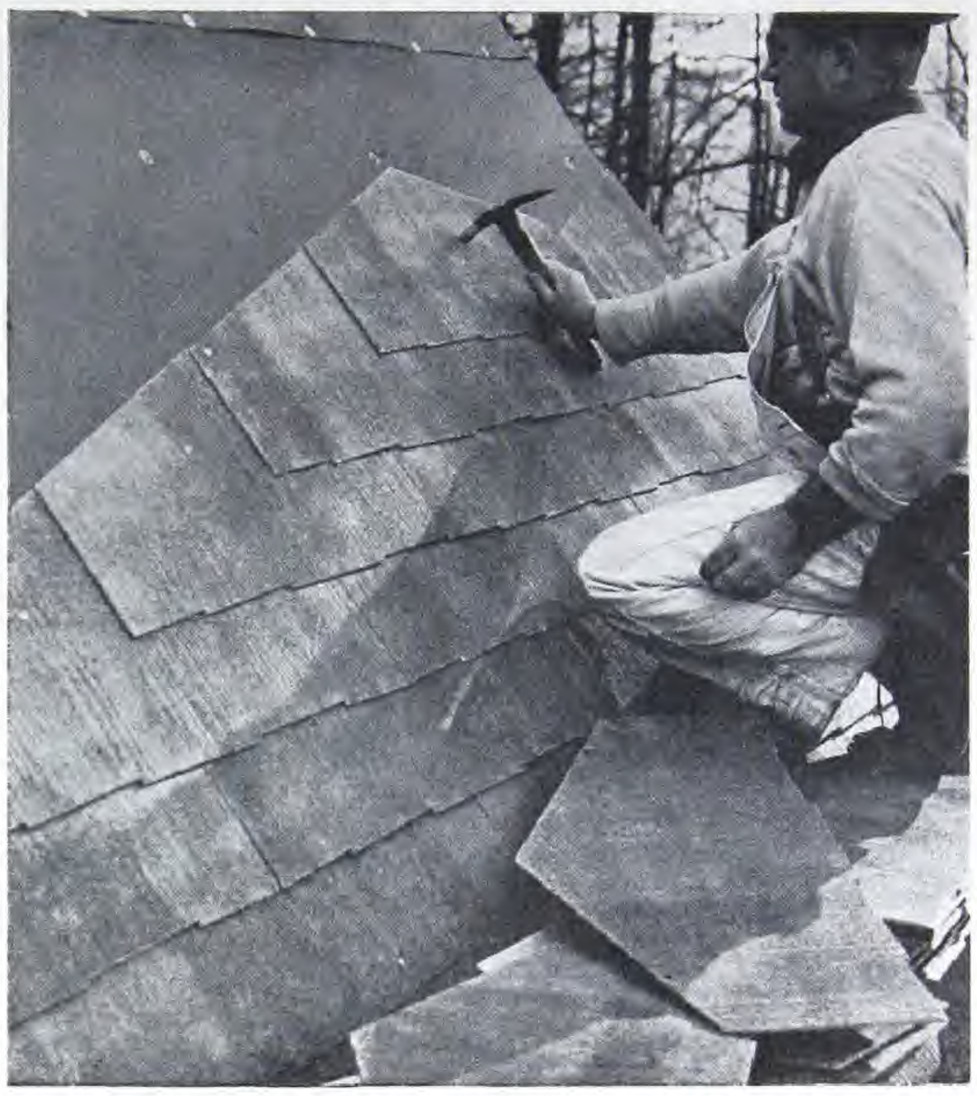
The modern demand is for roof and side wall protection which is not only fireproof and durable but also distinctive in appearance. Because J-M Rigid Asbestos Shingles so fully meet these requirements they are constantly becoming more popular. Made of asbestos fibre and cement formed under great pressure, these shingles cannot burn or decay and exterior maintenance expense is reduced to a minimum.

Recognizing the trend toward colorful roofs, Johns-Manville has sought to provide a wide choice and to produce pleasing variations of tone without too sharply contrasting hues and shades.

J-M Asbestos Siding Shingles provide distinctive shadow-line effects, with wavy or straight butt lines. They are available in white and attractive permatone color blends.

For both roofing and siding, J-M Asbestos Shingles make possible the most effective harmony between the house and the surrounding landscape.

Detailed information including styles, sizes, colors, weights, etc., is given on separate data sheets.



Each strip shingle on the roof covers as much area as the five ordinary strip shingles it appears to be

Asbestos Roofing Shingles

J-M American Colonial Asbestos Shingles provide a roof which is not only durable and attractive but extremely economical. Each strip shingle on the roof covers as much area as the five ordinary strip shingles it appears to be. Yet it can be applied in one operation, self-aligned.

American Colonial Shingles are offered in colors which harmonize with any natural surroundings and their clean-cut shadow lines make for interest in a roof.

J-M American Colonial Asbestos Shingles are durable, attractive and economical

Asbestos Siding Shingles

For side wall protection which is comparable to the roofing shingles in fire resistance and attractiveness, Johns-Manville has produced asbestos siding shingles. These shingles are divided into two groups, the universally popular textured white or gray asbestos shingles with grained surface accurately reproducing wood textures, and others which have colorful mineral granules pressed into their surface.

Application Directions

Complete directions for the application of J-M Rigid Asbestos Shingles, including flashings, and treatment of valleys, hips and ridges, appear on other data sheets. The following directions summarize the important details for proper application.

Roofing Shingles: The shingles should not be applied over a wet or damp roof deck. When a job is left partially complete, felt should be laid over the topmost applied courses to prevent rain from running down underneath the shingles.

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Charm and variety found in textured wood are an inherent part of J-M Asbestos Siding Shingles

The minimum roof pitch for American Colonial shingles is 5″ per foot. When the roofing shingles are used over sheathing, apply one layer of J-M Asbestos Slaters Felt horizontally before laying the shingles.

Boards on new roofs should be dry, well seasoned, of narrow width and uniform thickness, laid close (tongue and grooved preferred), and nailed with at least two nails to each rafter.

Satisfactory results can be secured applying asbestos shingles over old wood shingles; with the provision, however, that missing shingles are replaced, loose and curled shingles firmly nailed. After the surface is made as uniform as possible, J-M Asbestos Slaters Felt should be applied before the new shingles are laid.

Siding Shingles: When application is to be made over existing wood shingles or clapboards, loose and curled siding must be firmly nailed, decayed siding replaced and horizontal filler strips nailed against the butt edges of the existing siding or shingles. In some instances it may be more economical to remove existing siding down to the wood sheathing.

Work then proceeds in the same manner as over new sheathing using J-M Asbestos Slaters Felt applied over the side wall. A cant strip is placed along the bottom of the side wall before the first course is applied.

J-M Asbestos Shingle Accessories:

Asbestos Slaters Felt: For use as a liner under asbestos shingles. This asphalt-saturated asbestos felt is furnished in 3-sq (324 sq ft), 32″ wide, weighing 45 lb per roll.

Nails: J-M Asbestos Shingles are applied with Tin-Plated Bronze Face Nails, and Galvanized Needle-Point Nails. The first type is packed in cartons of 206 nails, in sizes of 1″ through 2″, in ¼″ increments. Galvanized Needle-Point Nails are furnished about 230 of 1¼″; 195 of 1½″; and 150 of 2″ nails per lb. The bronze nails are used for face-nailing of siding shingles.

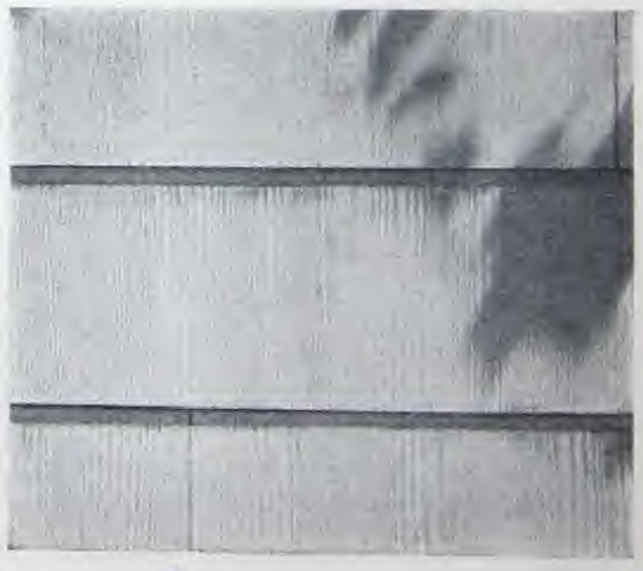
Siding Shingle Cleaner: A liquid for cleaning certain types of J-M Asbestos Siding Shingles in accordance with instructions. Furnished in 1-qt bottles or in cartons containing 4 one-quart bottles.

Shingle Cutter: Various styles are available for rapid, efficient cutting, punching and notching of asbestos shingles.

How Asbestos Shingles Are Sold

Asbestos shingles are sold by the square, which means sufficient shingles to cover 100 sq ft of surface when applied in accordance with manufacturer's directions. Necessary eave starters and ridge and hip shingles may be purchased separately.

Uniform thick, Asbestos Siding Shingles with Cedargrain Texture and wavy or straight butt lines, respectively



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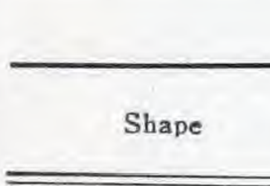
Asbestos Shingles from: Manville (M), Waukegan (W) and Marrero (G) Plants

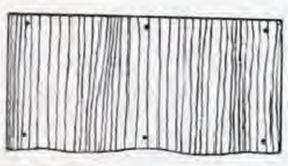
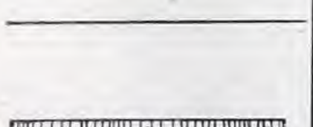
Asbestos Roofing Shingles

Shape	Catalog No., Style Colors (textured)	Plants	Size, in, Type	Exposure in	Shingles per sq	Approx. wt. lb per sq	Starters and Ridge Shingles
	No. 607 American Colonial (American method) Black blend Red blend Green blend Silver Gray Natural gray Dover white	 M W G M W G M W G G M W G	14 x 30 Uniform thickness	6	80	280; natural gray and white, 260	No. 636 starter No. 697 hip and ridge shingle

Starters and Ridge Shingles

Shape	Catalog Number and Style	Colors (textured)	Plants	Size, in, Type	Pieces per 100 linear ft	Approx. wt. lb 100 linear ft
	No. 636 starter—Used with No. 607 American Colonial shingle	Black blend Red blend Green blend Silver Gray Natural gray Dover white	M W G M W G M W G G M W G	30 wide Uniform thickness	40	65; natural gray and white, 60
	No. 697 hip and ridge shingle—Used with No. 607 American Colonial	Black blend Red blend Green blend Silver Gray Natural gray Dover white	M W G M W G M W G G M W G	$4\frac{19}{32}$ to $5\frac{11}{32}$ wide by 14 long Uniform thickness	340	255; natural gray and white, 235

Asbestos Siding Shingles

Shape	Catalog No.	Plants	Colors	Textures	Size, in, Type	Exposure, inches	Shingles per sq	Approx. wt, lb per sq
	105-U	M W G M W G M W G M W G	Permatone light green Permatone light buff Permatone silver gray Dover white	Cedargrain Cedargrain Cedargrain Cedargrain	24 x 12 Uniform thickness	24 x 10½	57	185
	107-U	G M W G	Permatone silver gray Dover white	Cedargrain Cedargrain	24 x 12 Uniform thickness	24 x 10½	57	185
	109-U	M W M W M W G M W G	Permatone light green Permatone light buff Permatone silver gray Dover white	Cedargrain Cedargrain Cedargrain Cedargrain	24 x 12 Uniform thickness	24 x 10½	57	185

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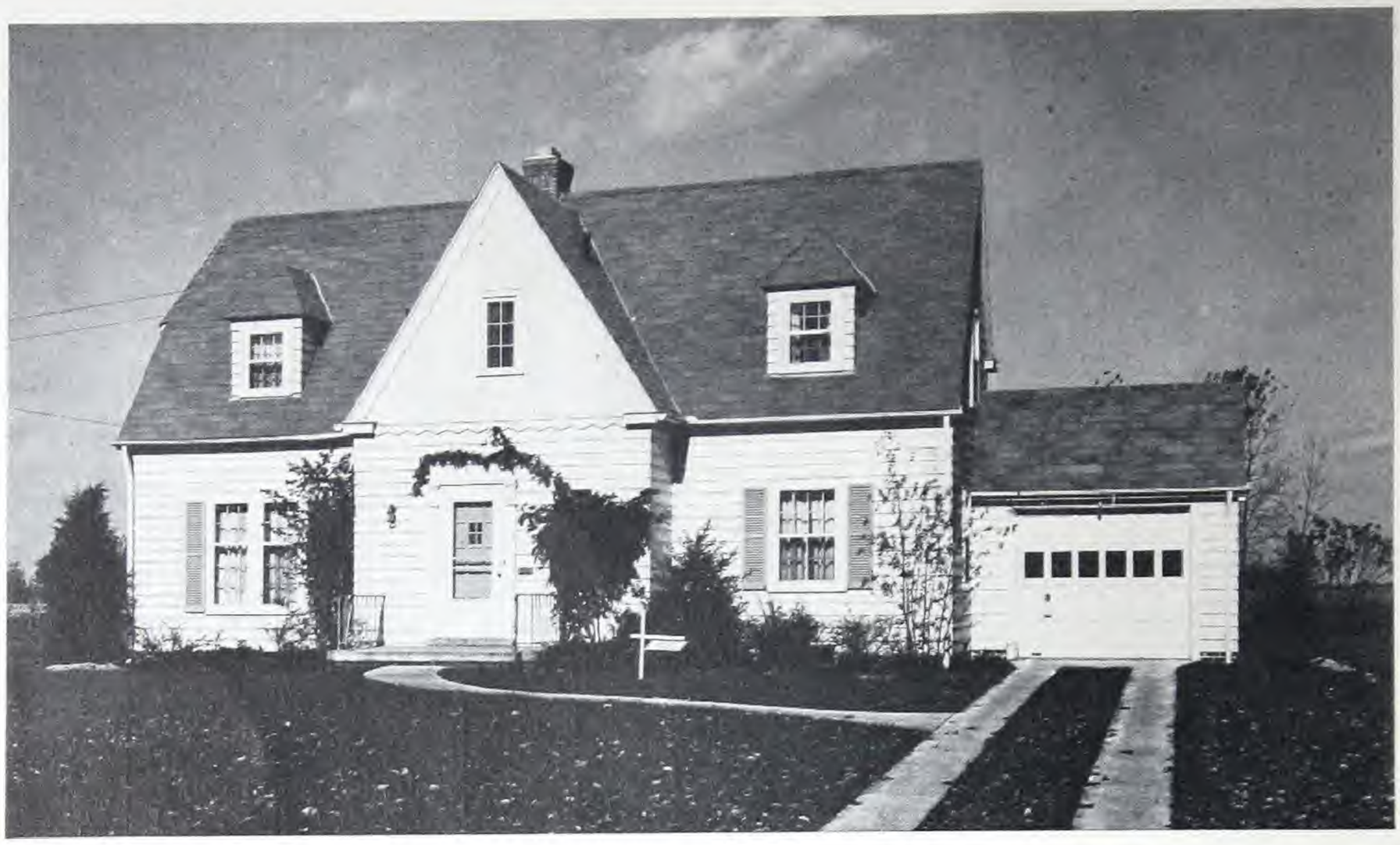

Roofs of J-M Asbestos Shingles are fireproof, durable and economical. The variety of colors available makes it possible to select one which provides the most effective harmony between the house and its surroundings

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J-M Asbestos Shingles Available from Pittsburg Plant

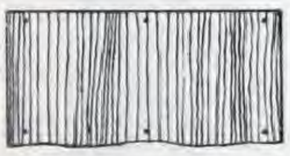
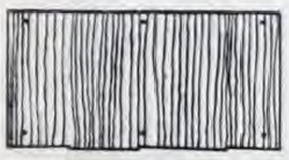
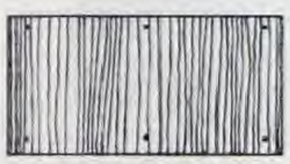
Asbestos Roofing Shingles

Shape	Catalog No., Style, Colors	Texture	Size, in., Type	Exposure in.	Shingles per sq	Approx. wt. lb per sq	Starters and Ridge Shingles
	No. 607 American Colonial (American method) Black blend Green blend Copper blend Silver gray blend White Permatone	Cedargrain	14 x 30 Uniform thickness	6	80	280	No. 636 starter No. 697 hip and ridge shingle

Starters and Ridge Shingles

Shape	Catalog Number and Style	Colors	Textures	Size, in., Type	Pieces per 100 linear ft	Approx. wt. lb 100 linear ft
	No. 636 starter—Used with No. 607 American Colonial shingle	Black blend Green blend Copper blend Silver gray blend White Permatone	Cedargrain	30 wide Uniform thickness	40	65
	No. 697 hip and ridge shingle—Used with No. 607 American Colonial	Black blend Green blend Copper blend Silver gray blend White Permatone	Cedargrain	$4^{19}/_{32}$ to $5^{11}/_{32}$ wide by 14 long Uniform thickness	340	255

Asbestos Siding Shingles

Shape	Catalog No.	Colors	Textures	Size, in., Type	Exposure, inches	Shingles per sq	Approx. wt. lb per sq
	105-U	Permatone light green Permatone light buff Permatone silver gray Permatone white	Cedargrain	24 x 12 Uniform thickness	24 x 10½	57	185
	107-U	Permatone Light Green Permatone Light Buff Permatone silver gray Permatone white	Cedargrain	24 x 12 Uniform thickness	24 x 10½	57	185
	109-U	Permatone light green Permatone light buff Permatone silver gray Permatone white	Cedargrain	24 x 12 Uniform thickness	24 x 10½	57	185

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Because of their fire-resistance, beautiful textures, and economy of application, J-M Asbestos Siding Shingles are widely used for side wall protection

Constructed of J-M Asbestos Roofing and Siding Shingles, the exterior of this cottage is fireproof and will not deteriorate or require periodic painting

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J-M Asbestos Shingles Available from Asbestos Factory

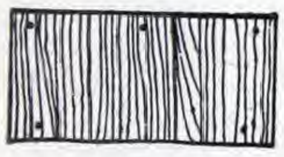
Asbestos Roofing Shingles

Shape	Catalog No.-style	Size	Type	Colors	Approx. wt. lb. per sq.	Weather exposure	Shingles per sq.	Starters and Ridge Shingles
	No. 607 Durabestos (American Method)	14" x 30"	Uniform thickness	Gray blend Black blend Red blend Green blend	290	6"	80	No. 636 starter No. 697 hip and ridge shingle

Starters and Ridge Shingles

Shape	Catalog number and style	Size	Type	Colors	Pieces per 100 linear ft.	Approx. wt. lb. 100 linear ft.
	No. 636 starter—Used with No. 607 Durabestos shingle	30" wide	Uniform thickness	Same as No. 607 Durabestos shingle	40	65
	No. 697 hip and ridge shingle —Used with No. 607 Durabestos shingle	$4\frac{19}{32}$" to $5\frac{11}{32}$" by 16" long	Uniform thickness	Same as No. 607 Durabestos shingle	340	300

Asbestos Siding Shingles

Shape	Catalog number	Size	Type	Colors	Texture	Approx. wt. lb. per sq.	Exposure	Shingles per sq.
	105-U	12" x 24"	Uniform thickness	Blended gray Dover white	Cedargrain	185	10½" x 24"	57

J-M Asbestos Shingles are equally adaptable for application on new structures or for re-roofing and re-siding

Printed in U. S. A.

The attractive J-M Durabestos roofing shingle is as economical and simple to apply as an asphalt strip shingle

Printed in U.S.A.

J-M Asphalt Shingles

J-M Asphalt Shingles provide long years of service at moderate cost

To meet the need for roof and side wall protection where low initial investment is a necessary limitation, Johns-Manville has developed a comprehensive line of asphalt shingles. J-M Asphalt Shingles provide long years of service at moderate cost. The shingles are made from a base of high-grade rag felt which is saturated with asphalt and then given a further coating of harder asphalt, into which is imbedded colorful mineral granules.

The durable color of the surface granules eliminates the expense of periodic painting. The mineral granules also make the shingles highly fire retardant. J-M Asphalt Shingles carry the Underwriters' Class C label when they are applied as roofing. Rating does not cover sidewall applications.

The various styles are available in a wide range of colors and blends which produce pleasing variegated effects without too sharply contrasting hues and shades. The variety makes possible the choice of the most effective color harmony between the house and the surrounding landscape.

If desired, J-M Asphalt Shingles can be applied directly over the old wood shingles with a minimum amount of preparation, eliminating the cost and trouble caused by removing the old shingles. The more important details of construction are summarized on the reverse of this sheet.

J-M Asphalt Shingles are made in several styles among which are square-butt and hexagonal strips.

J-M Thick-Butt Asphalt Shingles, made with square butts, are designed to give greater protection because of an extra thickness of asphalt and granules on the tabs. This extra facing protects the saturant from the drying-out action of the sun. Because of their design, however, these shingles weigh but little more than ordinary asphalt shingles.

Details of application and accessories are outlined on the reverse of this sheet.

Printed in U. S. A.

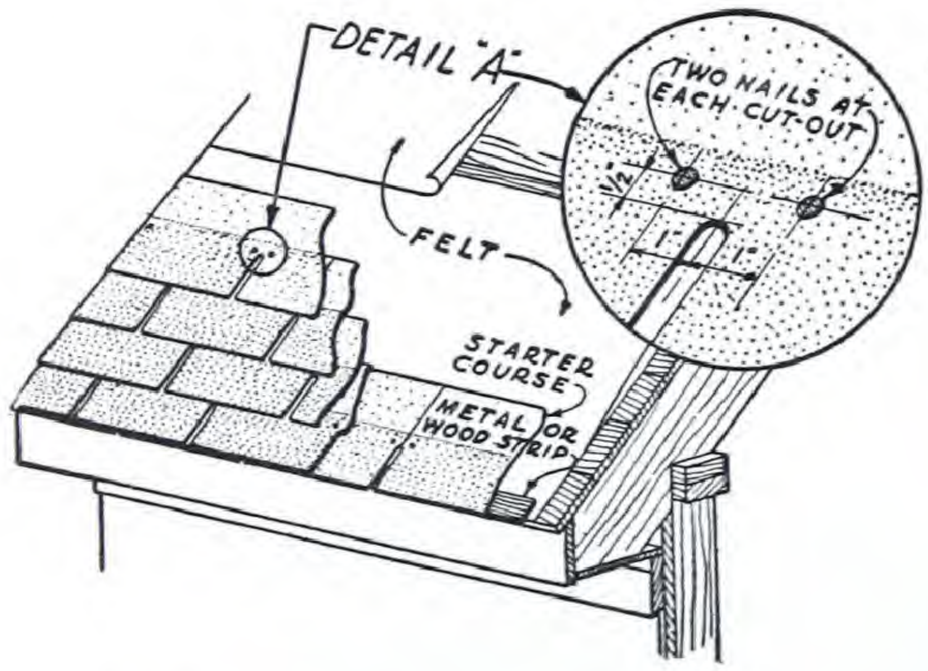
J-M Hexagonal Asphalt Shingles

Application of J-M Asphalt Shingles

Complete directions for the application of J-M Asphalt Shingles, including flashings, and treatment of valleys, hips and ridges, appear on other data sheets. The following directions summarize the important details for proper application.

Roofing Application:

J-M Asphalt Shingles can be used on roofs where the pitch is 4″ (5″ for certain types) to the foot, or more. When used over wood sheathing, one layer of Standard Asphalt-Saturated Rag Felt, not less than 15-lb. weight, lapped at least 2″ at all joints, should be applied before the shingles are laid.



When application is to be made over old wood shingles, all decayed and missing shingles should be replaced and all loose and curled shingles securely nailed down to make the surface as smooth as possible. It may be necessary to smooth out the old roof deck by nailing on beveled wood strips with the thick edges against the butts of the wood shingles.

Sidewall Application: Asphalt shingles, when applied on sidewalls, are primarily used to re-cover the walls of buildings already constructed. When application is to be made over existing wood shingles or clapboards, a layer of Standard Asphalt-Saturated Rag Felt, not less than 15-lb. weight, is applied directly over the old wall, after loose, curled and decayed siding or shingles have been fastened or replaced, and after horizontal filler strips have been nailed against the butt edges of the siding or shingles.

As previously mentioned, Underwriters' classification does not apply when the asphalt shingles are used for sidewall application.

Asphalt Shingle Accessories:

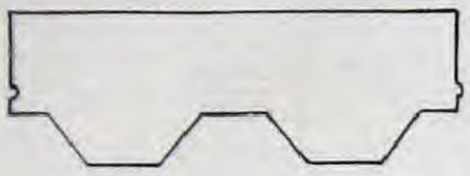
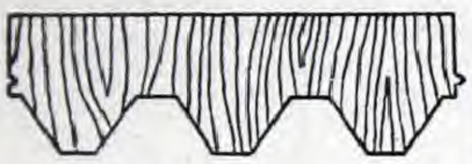
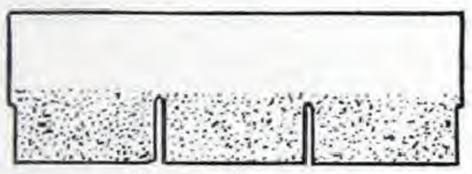
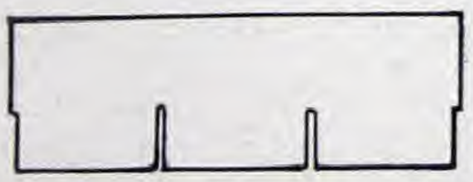
J-M Standard Asphalt-Saturated Rag Felt: This felt is primarily used as a liner under the shingles. It is furnished in 36″-wide rolls as shown below:

Style No.	Area of roll, sq. ft.	Total weight per roll, lb.
30	216	60
15	432	60

Slatekote Starting Strips: Slatekote Starting Strips are cut from standard Slatekote Roofing for use with J-M Asphalt Shingles, as starters. These strips are also used to line valleys and cover hips and ridges. The strips are furnished, in several colors, in rolls 36 ft. long in three widths: 9″, 12″ and 18″, weighing 21, 28 and 42 lb. per roll respectively.

J-M Thick-Butt Asphalt Shingles

Asphalt Shingles from: Manville (M), Waukegan (W) and Marrero (G) Plants

Shape	Names, Plants and Colors	Size, in.	Exposure in.	Head lap, in.	Shingles per sq.	Approx. wt. lb., per sq.
	**11⅓" Standard—2 Tab Hexagonal Shingles** (Smooth Surface) M G Fieldstone Green M G Spruce Green M G Black M G Tile Red M G Green Blend M Red Blend M G Blue Blend G Brown Blend	36 x 11⅓	4⅔	2	86	167
	**11⅓" Standard—3 Tab Hexagonal Shingles** W (Textured Surface): Spruce Green; Green Blend; Red Blend; Blue Blend; Blue Green Blend; Brown Blend W (Smooth Surface): Fieldstone Green; Spruce Green; Tile Red; Black; Green Blend; Red Blend; Blue Blend	36 x 11⅓	4⅔	2	86	167
	**12" Thick-Butt Strip Shingles** (Smooth Surface) MWG Fieldstone Green MWG Spruce Green MWG Black MWG Tile Red MWG Red Blend MWG Green Blend MW Slate Blend MW Varicolor Slateblend MW Blue Blend MWG Blue Green Blend M G Brown Blend	36 x 12	5	2	80	210
	**12" Thick-Butt Strip Shingles** (Textured Surface) WG Spruce Green G Black W Green Blend WG Blue Blend W Brown Blend	36 x 12	5	2	80	210
	**Giant Strip Shingles** (Smooth Surface) MWG Spruce Green MWG Tile Red MWG Black MWG Green Blend MWG Red Blend MWG Blue Blend MWG Blue Green Blend M Slate Blend M Varicolor Slateblend W Brown Blend	36x12	5	2	80	250

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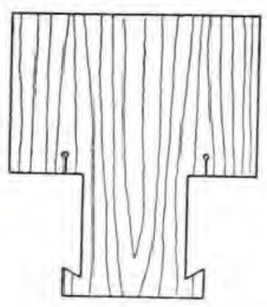
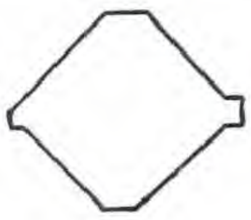
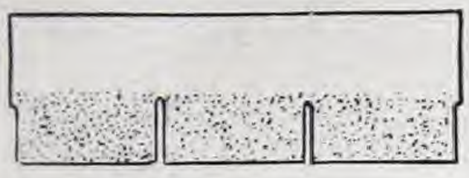
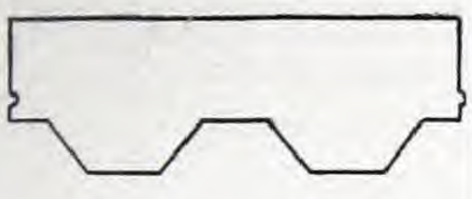
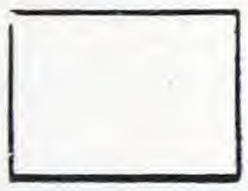
Asphalt Shingles Available from Manville (M), Waukegan (W) and Marrero (G) Plants—cont.

Shape	Names, Plants and Colors	Size, in.	Exposure in.	Head lap, in.	Shingles per sq.	Approx. wt. lb., per sq.
	**Giant Unit Shingles** **Dutch Lap Method** M Blue Blend MWG Spruce Green MWG Black MWG Tile Red	16 x 12	13 x 10	2	112	160
	**Weatherlok Shingles** M Spruce Green M Black M Tile Red	16 x 16	13 x 13	3	86	135
	**Weathermaster Shingles** W Spruce Green W Red Blend W Black W Green Blend W Blue Blend	20 x 23	—	3	72	160
	**Standard Metalok Shingles** G Spruce Green G Tile Red G Black G Ocean Blueblend	16 x 16	13½x13½	2½	82	135
	**Hip and Ridge Shingles†** MWG Spruce Green MW Fieldstone Green MWG Tile Red MWG Black MW Red Blend MW Green Blend M Slate Blend M Varicolor Slateblend MW Blue Blend MW Blue Green Blend MW Brown Blend † For hips and ridges only	9 x 12¾	—	—	378	253
	**Wide-Tex Siding Shingles** M Bufftone M Greentone M Browntone M Silver Gray	16 x 12	14 x 10	2	103	147

Printed in U.S.A.

J-M Asphalt Shingles Available from Pittsburgh and Los Angeles Plants

Shape	Names and colors	Size, in.	Exposure, in.	Head lap, in.	Shingles per sq.	Approx. wt. lb., per sq.
	**12" Thick Butt Strip Shingles** Sunset red — Black Spruce green — Silver gray Green blend — Blue blend Brown blend — Silver gray blend	36x12	5	2	80	210
	**11⅓" Standard Hexagonal Shingles** Black — Spruce green Sunset red — Silver gray	36x11⅓	4⅔	2	86	167
	**Latch Thatch Shingles** Sunset red — Spruce green Black — Silver gray	18x12	8¼	3¾	116	150
	**Dutch Lap Shingles*** Spruce green — Sunset red Black — Silver gray	16x12	13x10	2	112	130
	**Hip and Ridge Shingles** Spruce green — Sunset red Black — Silver gray Green blend — Blue blend Brown blend — Silver gray blend	12¾x9	4	8¾	378	252

* Dutch Lap Shingles (Pittsburg only).

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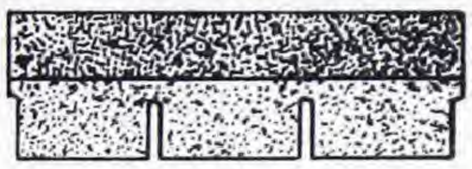
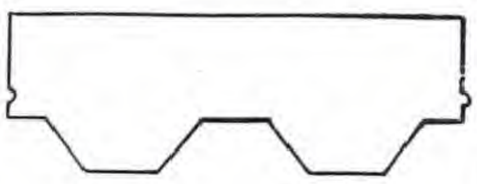
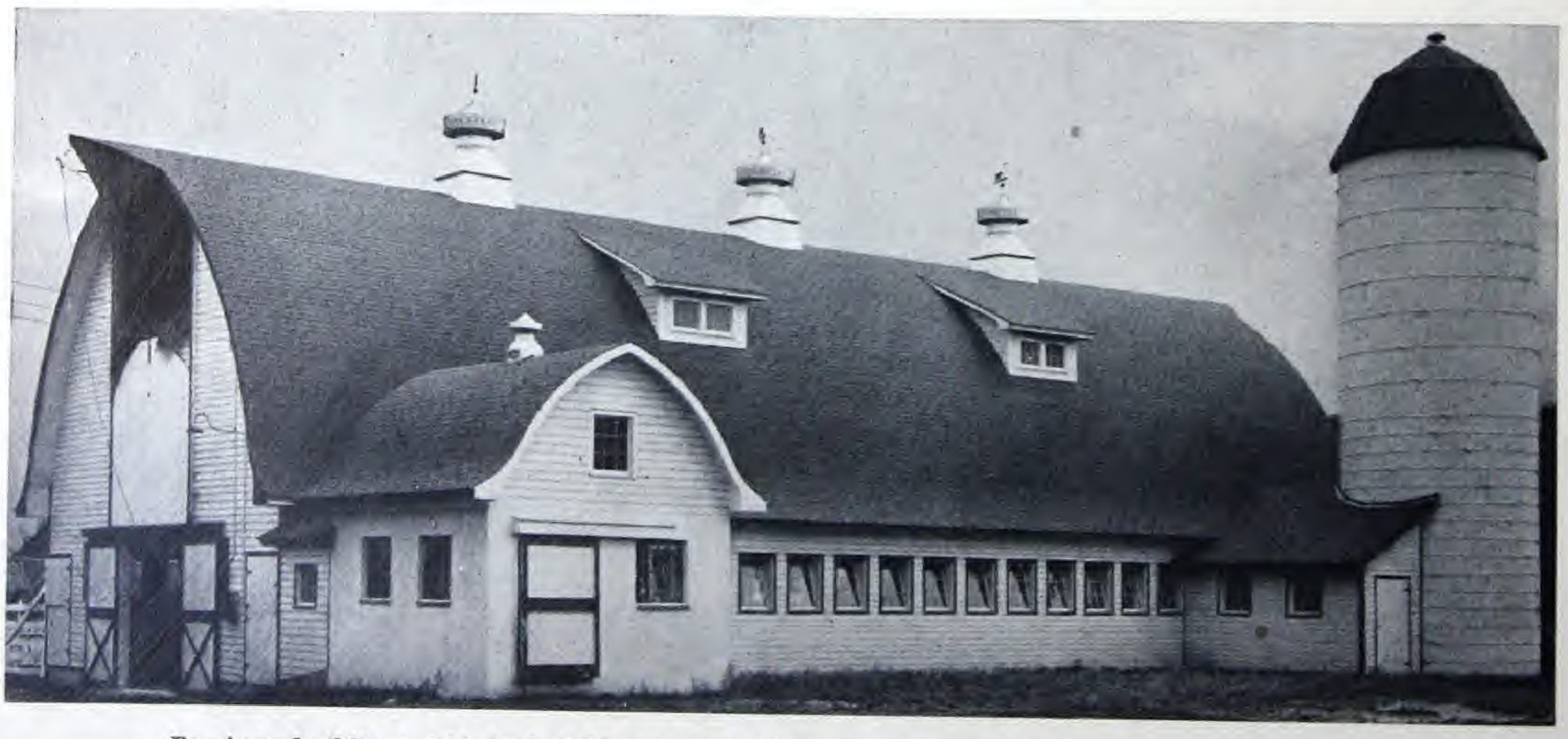
J-M Asphalt Shingles Available from Asbestos Plant

Shape	Names and colors	Size, in.	Exposure, in.	Head lap, in.	Shingles per sq.	Approx. wt. lb., per sq.
	**Flexstone Thick-Butt Shingles** Standard blue-black — Killarney green Tile red — Montrose red Standard green — Autumn brown Spruce green — Heather blue Imperial blue	36x12	5	2	80	210
	Slatekote Thick-Butt Shingles Standard blue-black — Killarney green Tile red — Montrose red Standard green — Autumn brown Spruce green — Heather blue Imperial blue	36x12	5	2	80	210
	**Flexstone Hexagonal Shingles** Tile red — Montrose red Standard green — Killarney green Spruce green — Standard blue-black	36x11⅓	4⅔	2	86	165
	Slatekote Hexagonal Shingles Tile red — Montrose red Standard green — Killarney green Spruce green	36x11⅓	4⅔	2	86	165
	**Slatekote Locnotch Individual Shingles** Standard green — Tile red Standard blue-black — Killarney green Spruce green	16x16	14x14	2	80	125



For farm buildings, J-M Asphalt Shingles provide economical weather protection, fire resistance and attractive appearance

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